# Determination of Public Land (Rangeland) Health for 61007 CHAVEROO

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate local indicators were completed for this allotment. Based on assessments, it is my determination that public land within Chaveroo allotment #61007, meets the (1) Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard was not addressed.

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|---|---|
| /s/ Eddie Bateson | 8/8/2006 |
| Field Manager | Date |

# Standards of Public Land Health
# Evaluation of 61007 CHAVEROO Allotment
# [ 10/15/2005 ]

The Roswell Field Office conducted a rangeland health assessment at one (1) study site within the Chaveroo allotment #61007. This assessment evaluated Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within each study site vicinity. Existing monitoring data was incorporated into and in support of these field assessments. A summary of each assessment is attached and shown in the following table.

| **Study Area or Assessment Area** | UPLAND | | | BIOTIC | | | RIPARIAN | | |
|---|---|---|---|---|---|---|---|---|---|
| | Meets | Monitor an Indicator | Does Not Meet | Meets | Monitor an Indicator | Does Not Meet | Meets | Monitor an Indicator | Does Not Meet |
| 61007-ONE-A006 | X | | | X | | | N/A | | |

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Chaveroo, allotment #61007. Ten of these assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with quantitative information gathered from previous data collected on one location were utilized to assess rangeland health of public land within this allotment. This allotment is a "C" (custodial) category due to small amounts of public land present.

One Pasture is the lone site on this allotment evaluated. Total acres for this HP-3 Sandy Plains ecological site is 320 or 130 hectares. Located in Roosevelt county, this soil phase is Brownfield fine sand on 0 to 3 percent slopes. It is underlain by a strongly calcareous substratum of undetermined thickness with good internal drainage. Two previous data collections for production and ground cover were performed ; one in 1991 and 2005. Long-term averages from this monitoring were not factored into those quantitative indicator ratings, as ecological site descriptions better reflect these parameters. Indicators of concern rating Moderate were bare ground, annual production, wildlife and special status species habitat respectively. Bare ground was estimated at 30 percent doubling that for the ESD at 15 percent. However adequate vegetative and litter cover remain for site protection. Annual production was 40 to 50 percent of the ESD with an estimate of 550-600 lbs/ac or kg/ha. A moderate amount of wildlife and special status species habitat was in less than satisfactory condition. Sand bluestem (Andropogon hallii) and little bluestem (Schizachyrium scoparium) both were found in lesser amounts. A ratio of 75:25 grass/shinnery oak (Quercus havardii) currently exists. This parameter is one factor by which lesser prairie chicken (Tympanuchus pallidicinctus) nesting cover is based. Sand sage (Artemesia filifolia), dropseed (Sporobolus spp.), blue grama (Bouteloua gracilis) and buckwheat (Eriogonum spp.) were some other plants observed.

Snakeweed (Gutierrezia sarothrae) and yucca (Yucca spp.) were the only shrub species of concern, but were found less than scattered. Some livestock were observed at evaluation utilizing at conservative levels. All other indicators fell within normal range of variability.

In the professional opinion of the Assessment Team, public land within Chaveroo, allotment #61007 meets Upland and Biotic standards. There are no Riparian areas within this allotment therefore this standard was not addressed. See site notes and recommendations for further information pertinent to this allotment.

**Recommendations:** Current management schemes for this allotment should continue. Conservative grazing is best advised for those areas where lesser prairie chicken and other special status species occur. Utilization at 25-35 percent is best recommended and should continue for this allotment.

| RFOs Upland and Biotic Standard Assessment Summary Worksheet | | | |
|---|---|---|---|
| **SITE 61007-ONE-A006** | | | |
| Legal Land Desc | SWSE 18 0070S 0340E Meridian 23 | Acreage | 320 |
| Ecosite | 077CY056NM SANDY PLAINS HP-3 | Photo Taken | Y |
| Watershed | 12050001080 LINGO | | |
| Observers | ARTHUN/MOE | Observation Date | 12/27/2005 |
| County Soil Survey | NM041 ROOSEVELT | Soil Var/Taxad | |
| Soil Map Unit | Be | Soil Taxon Name | BROWNFIELD |
| Texture Class | NM041 FS | Soil Phase | BROWNFIELD |
| Texture Modifier | NM041 FINE SAND | | |
| Observed Avg Annual Precipitation | | Observed Avg Growing Season Precipitation | |
| NOAA Annual Precipitation | 19.55 | NOAA Growing Season Precipitation | 15.86 |
| NOAA Avg Annual Precipitation | 15.73 | NOAA Avg Growing Season Precipitation | 13.34 |
| Disturbances and Animal Use: | Some livestock utilize this pasture, but at conservative levels. | | |

**Part 2. Attributes and Indicators**

| | | Departure from Ecological Site Description/Ecological Reference Areas | | | | |
|---|---|---|---|---|---|---|
| Attribute | Indicators | Extreme | Moderate to Extreme | Moderate | Slight to Moderate | None to Slight |
| | | | | | | |
| S H | Rills | | | | | X |
| Comments: | | | | | | |
| S H | Water Flow Patterns | | | | X | |
| Comments: | | | | | | |
| S H | Pedestals and/or Terracettes | | | | X | |
| Comments: | | | | | | |
| S H | Bare Ground | | | X | | |
| Comments: | 30% is the current estimate. | | | | | |
| S H | Gullies | | | | | X |
| Comments: | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| S | Wind-scoured, Blowouts, and/or Deposition Areas | | | | X | |
| Comments: | | | | | | |
| H | Litter Movement | | | | X | |
| Comments: | | | | | | |
| S H B | Soil Surface Resistance to Erosion | | | | X | |
| Comments: | | | | | | |
| S H B | Soil Surface Loss or Degradation | | | | X | |
| Comments: | | | | | | |
| H | Plant Community Composition and Distribution Relative to Infiltration and Runoff | | | | X | |
| Comments: | | | | | | |
| S H B | Compaction Layer | | | | | X |
| Comments: | | | | | | |
| B | Functional/Structural Groups | | | | X | |
| Comments: | | | | | | |
| B | Plant Mortality/Decadence | | | | | X |
| Comments: | | | | | | |
| H B | Litter Amount | | | | | X |
| Comments: | Current estimate is 60%. | | | | | |
| B | Annual Production | | | X | | |
| Comments: | Current estimate is 600 lbs/ac or kg/ha. | | | | | |
| B | Invasive Plants | | | | X | |
| Comments: | | | | | | |
| B | Reproductive Capability of Perennial Plants | | | | X | |
| Comments: | Some grazing observed on grasses. | | | | | |
| S | Physical/Chemical/Biological Crusts | | | | X | |
| Comments: | Physical crusts seen. | | | | | |
| B | Wildlife Habitat | | | X | | |
| Comments: | | | | | | |
| B | Wildlife Populations | | | | X | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Comments: | | | | | | |
| B | Special Status Species Habitat | | | X | | |
| Comments: | | | | | | |
| B | Special Status Species Populations | | | | X | |
| Comments: | | | | | | |

**Part 3. Summary**

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

| Standard Attribute | | Extreme | Moderate to Extreme | Moderate | Slight to Moderate | None to Slight |
|---|---|---|---|---|---|---|
| S | Soil | 0 | 0 | 1 | 6 | 3 |
| H | Hydrologic | 0 | 0 | 1 | 6 | 4 |
| B | Biotic | 0 | 0 | 3 | 7 | 3 |

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

| Attribute | Rationale | Does Not Meet | May Need More Info | Meets |
|---|---|---|---|---|
| Soil | | 0 | 1 | 9 |
| Hydrologic | | 0 | 1 | 10 |
| Biotic | | 0 | 3 | 10 |

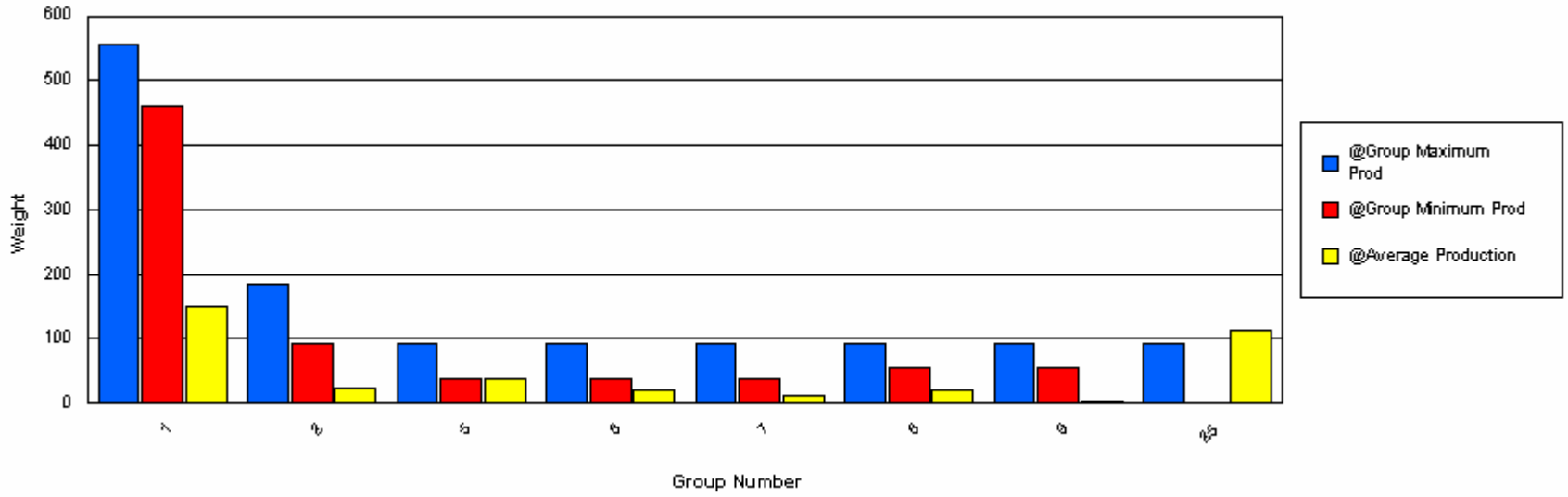
Site Notes: A mixture of 75:25 grass/shinnery oak is observed. Snakeweed, threeawn, dropseed, little bluestem,sand bluestem, yucca, sand sage, mentzelia, and buckwheat are the vegetation species present.

# Functional / Structural Groups

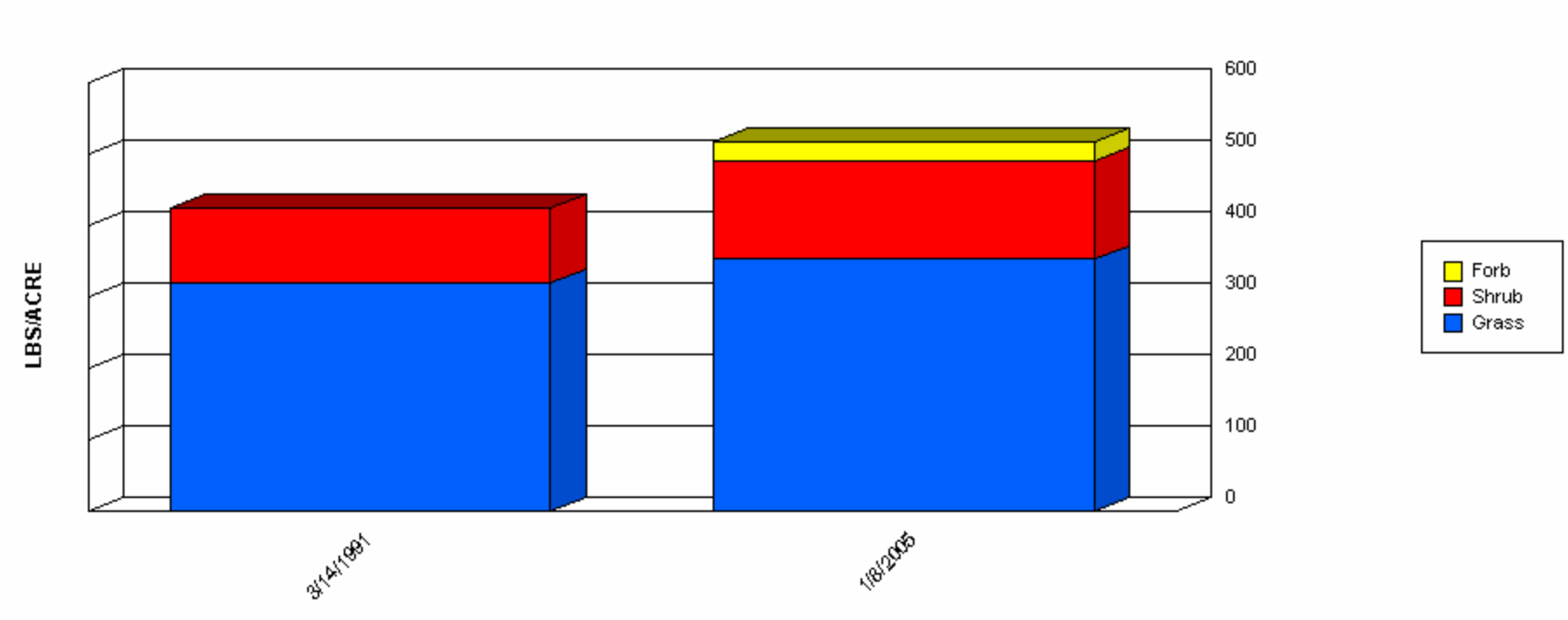
| Report Parameters | |
|---|---|
| SITE NAME LIKE | 61007-ONE-A006 |
| ON/AFTER | 10/01/1990 |
| ON/BEFORE | 09/30/2005 |
| MIN LBS TO GRAPH | 1 |
| SELECTED ECOSITE | 077CY056NM |

| Group | Plant Type | Species | Low Wt Allowed | High Wt Allowed | Minimum | Maximum | Average | STDEV |
|---|---|---|---|---|---|---|---|---|
| 1 | Grass | SCSC | 462 | 555 | 133.63 | 164.22 | 148.93 | 15.30 |
| 2 | Grass | ANHA | 92 | 185 | 9.50 | 33.97 | 21.74 | 12.24 |
| 5 | Grass | BOHI2 | 37 | 92 | 26.40 | 47.60 | 37.00 | 10.60 |
| 6 | Grass | PAST6 | 37 | 92 | 0.00 | 39.90 | 19.95 | 19.95 |
| 7 | Grass | DICOC | 37 | 92 | 11.34 | 12.11 | 11.73 | 0.39 |
| 8 | Grass | ARIST | 55 | 92 | 0.00 | 43.12 | 21.56 | 21.56 |
| 9 | Grass | SPCR | 55 | 92 | 0.00 | 4.14 | 2.07 | 2.07 |
| 25 | Shrub | QUHA3 | 0 | 92 | 106.20 | 119.66 | 112.93 | 6.73 |

| Group | Plant Type | Species | Low Wt Allowed | High Wt Allowed | Minimum | Maximum | Average | STDEV |
|---|---|---|---|---|---|---|---|---|



# Production Lbs/Acre Trends

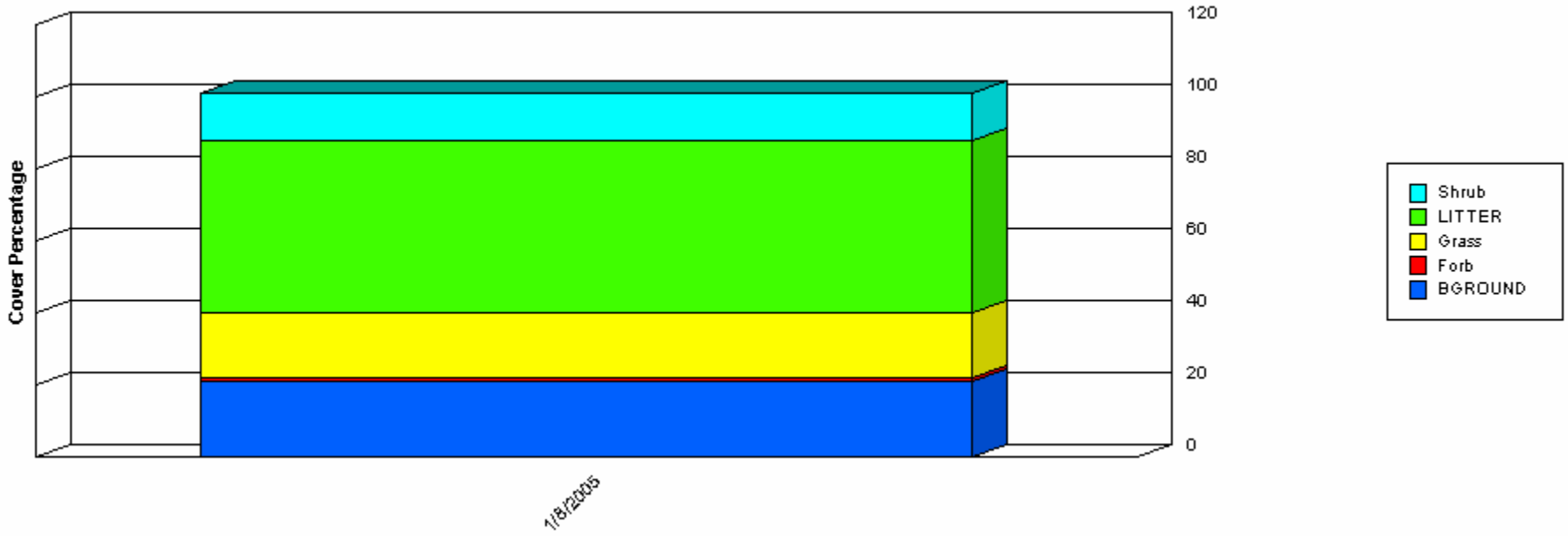



| | 3/14/1991 | 1/8/2005 |
|---|---|---|
| Forb | **0.00** | **26.41** |
| Grass | **319.82** | **353.28** |
| Shrub | **106.20** | **138.36** |
| Total | **426.02** | **518.05** |

## Report Parameters

| | |
|---|---|
| SITE NAME LIKE | 61007-ONE-A006 |
| ON/AFTER | 10/01/1990 |
| ON/BEFORE | 09/30/2005 |

# Ground Cover Trends




| | 1/8/2005 |
|---|---|
| BGROUND | 21.00 |
| Forb | 1.00 |
| Grass | 18.00 |
| LITTER | 48.00 |
| Shrub | 13.00 |
| Total | 101.00 |

Robel Pole Summary over Time Report

Report Parameters

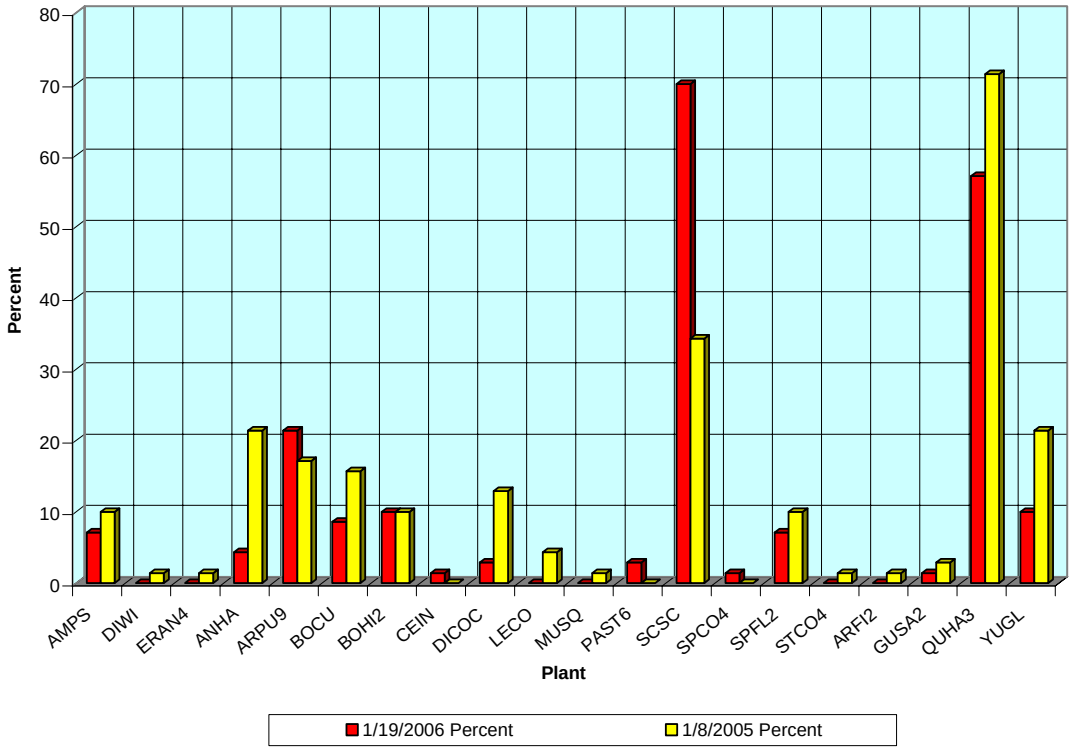
| | |
|---|---|
| SITE NAME LIKE | 61007-ONE-A006 |
| ON/AFTER | 10/1/2004 |
| ON/BEFORE | 9/30/2006 |

| Primary Obstructions | 61007-ONE-A006 | 61007-ONE-A006 |
|---|---|---|
| | 1/19/2006 | 1/8/2005 |
| Flag Stations | 3 | 1 |
| | % Hits | % Hits |
| BGROUND | 14.30% | 21.40% |
| LITTER | 45.70% | 55.70% |
| ANHA | 2.90% | 0.00% |
| ARPU9 | 2.90% | 7.10% |
| BOCU | 1.40% | 0.00% |
| BOHI2 | 2.90% | 2.90% |
| DICOC | 1.40% | 1.40% |
| SCSC | 18.60% | 4.30% |
| GUSA2 | 0.00% | 1.40% |
| QUHA3 | 8.60% | 4.30% |
| YUGL | 1.40% | 1.40% |

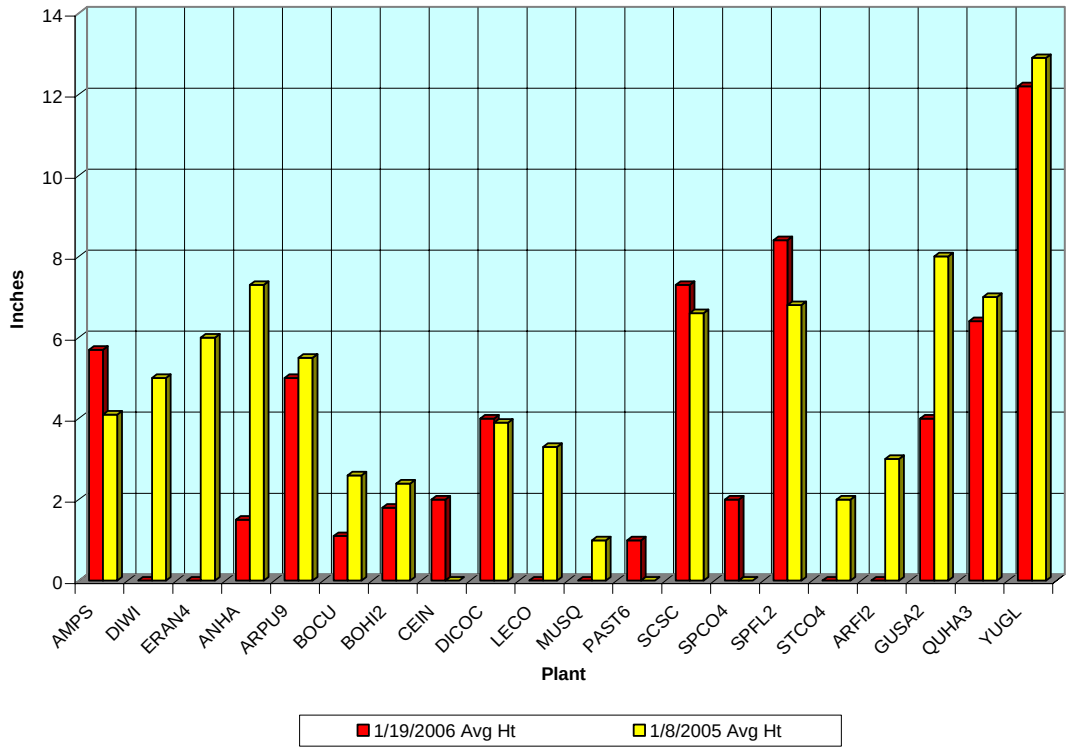
| Secondary Obstructions | 61007-ONE-A006 | | 61007-ONE-A006 | |
|---|---|---|---|---|
| | | 1/19/2006 | | 1/8/2005 |
| | Percent | Avg Ht | Percent | Avg Ht |
| AMPS | 7.1 | 5.7 | 10 | 4.1 |
| DIWI | 0 | 0 | 1.4 | 5 |
| ERAN4 | 0 | 0 | 1.4 | 6 |
| ANHA | 4.3 | 1.5 | 21.4 | 7.3 |
| ARPU9 | 21.4 | 5 | 17.1 | 5.5 |
| BOCU | 8.6 | 1.1 | 15.7 | 2.6 |
| BOHI2 | 10 | 1.8 | 10 | 2.4 |
| CEIN | 1.4 | 2 | 0 | 0 |
| DICOC | 2.9 | 4 | 14.3 | 3.8 |
| MUSQ | 0 | 0 | 1.4 | 1 |
| PAST6 | 2.9 | 1 | 0 | 0 |
| SCSC | 70 | 7.3 | 34.3 | 6.6 |
| SPCO4 | 1.4 | 2 | 0 | 0 |
| SPFL2 | 7.1 | 8.4 | 10 | 6.8 |
| STCO4 | 0 | 0 | 1.4 | 2 |
| ARFI2 | 0 | 0 | 1.4 | 3 |
| GUSA2 | 1.4 | 4 | 2.9 | 8 |
| QUHA3 | 57.1 | 6.4 | 71.4 | 7 |
| YUGL | 10 | 12.2 | 21.4 | 12.9 |

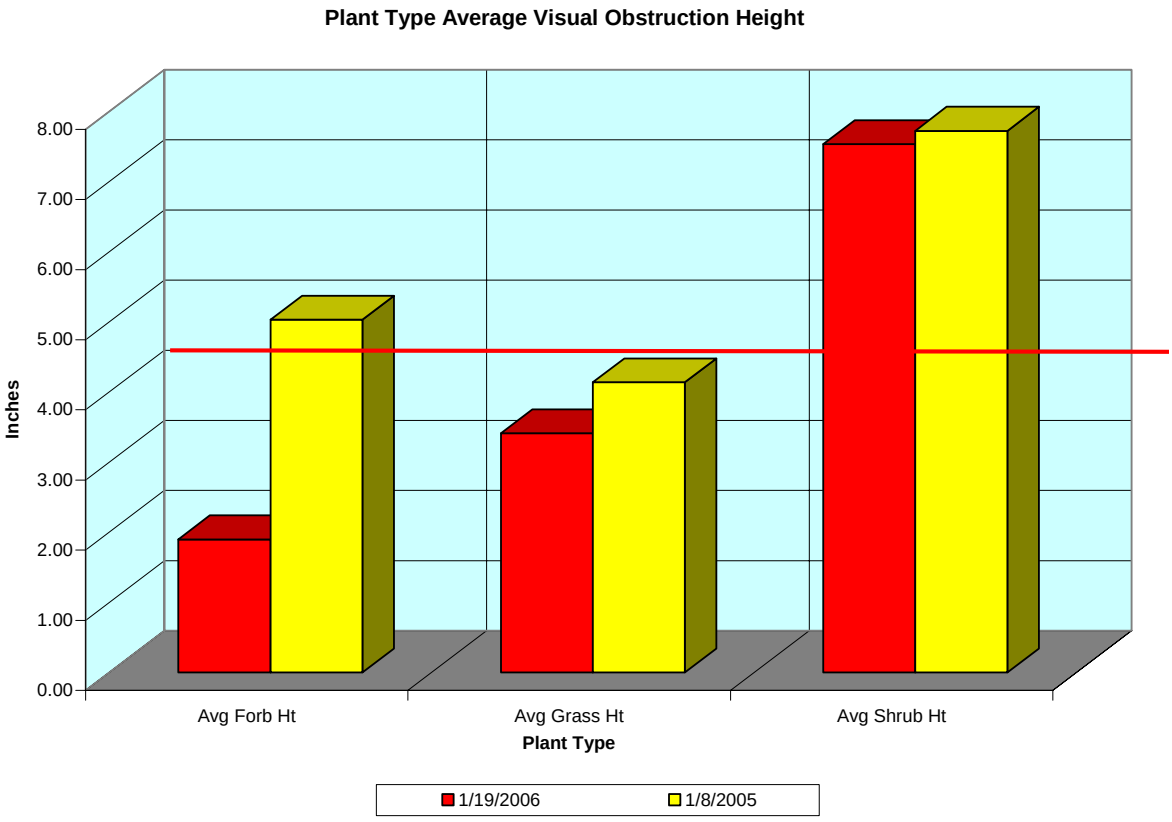
| | 1/19/2006 | 1/8/2005 |
|---|---|---|
| Avg Forb Ht | 1.90 | 5.03 |
| Avg Grass Ht | 3.41 | 4.14 |
| Avg Shrub Ht | 7.53 | 7.73 |

## Plant Composition




## Plant Visual Obstruction Height




Plant Type Average Visual Obstruction Height
Inches
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Avg Forb Ht
Avg Grass Ht
Avg Shrub Ht
Plant Type
1/19/2006
1/8/2005